

IN THE CLAIMS:

Please amend the claims of this application so as to read as follows:

1-27. (Canceled, without prejudice)

28. (Currently Amended) A data storage medium with display data recorded thereon, wherein the display data is recorded in the form of pre-specified units, each pre-specified unit of display data including display information and scroll display control information, and wherein the scroll display control information specifies the scroll path of the display of the display information along which scrolling is to be conducted as line segments having different directions in a coordinate system defined by said pre-specified unit according to coordinate values assigned to the display information in said pre-specified unit.

29. (Previously Presented) The data storage medium with display data recorded thereon as defined in claim 28, characterized in that each pre-specified unit of recorded display data is a page.

30. (Currently Amended) The data storage medium with display data recorded thereon as defined in claim 28, characterized in that the scroll display control information defines a plurality of intervals that together form said scroll path, the intervals being specified by line segments having different directions in said co-ordinate system defined by said pre-specified unit.

31. (Previously Presented) A data storage medium with display data recorded thereon as defined in claim 28, characterized in that the scroll display control information includes information for linking with scroll display control information of another pre-specified unit.

32. (Previously Presented) A data storage medium with display data recorded thereon wherein the display data is recorded in the form of pre-specified units, each pre-specified unit of display data including display information and scroll display control information, and wherein the scroll display control information includes information specifying a scroll display speed.

33. (Previously Presented) A data storage medium with display data recorded thereon as defined in claim 28, characterized in that the scroll display control information includes information specifying display information associated with selected areas of said coordinate system defined by said pre-selected unit for scroll display.

34. (Previously Presented) A data storage medium with display data recorded thereon as defined in claim 28, characterized in that the scroll display control information includes information for specifying a scale of enlargement or reduction of a display area for scroll display.

35. (Currently Amended) A data storage medium with display data recorded thereon wherein the display data is recorded in the form of pre-specified units, each pre-specified unit of display data including display information and scroll display information, wherein the scroll display control information includes synchronous reproduction information for specifying non-motionless data such as ~~sound or moving images~~ to be reproduced in synchronism with the scroll display.

36. (Currently Amended) A display device for reproducing and displaying the storage medium with display data recorded thereon as defined any one of claims 28 to 35, which performs comprising a display controller for performing scroll display based on the scroll display control information.

37. (Currently Amended) A display device as defined in claim 36, characterized in that it is provided with further comprising a scroll indicating means for scroll display.

38. (Currently Amended) A data storage medium with display data associated with an entire document or the like recorded thereon, said display data including image data objects for display on a display screen, management information associated with each of said image data objects and information for scroll display on said display screen associated with each of said image data objects, comprising:

a computer readable medium in which said display data is recorded in the form of distinct files, each said file containing a preselected pre-selected portion of said display data including image data objects along with their respective associated management information and information for scroll display, wherein said information for scroll display includes scroll path information specifying the scroll path along which scrolling of each of said image data objects or groupings thereof associated therewith is to be conducted as line segments having selected different directions in a coordinate system defined by said file according to coordinate values assigned to said image data object or groupings thereof in said file.

39. (Currently Amended) The data storage medium with display data recorded thereon as defined in claim 38, characterized in that the preselected pre-selected portion of said display data is a page grouping of said image data objects.

40. (Currently Amended) The data storage medium with display data recorded thereon as defined in claim 38, characterized in that the information for scroll display ~~includes information for scrolling the image data objects or groupings thereof associated therewith in each said file on a display screen of a display device in selected different directions relative to one another defines a plurality of intervals that together form a scroll path, the intervals being specified by line segments having different directions in a co-ordinate system defined by said image data objects.~~

41. (Previously Presented) A data storage medium with display data recorded thereon as defined in claim 38, characterized in that the information for scroll display associated with the image data objects contained in each one of said files includes information for linking the display of the image data objects contained in each one of said files with information for scroll display of the image data objects contained in at least another one of said files.
42. (Previously Presented) A data storage medium with display data recorded thereon as defined in claim 38, characterized in that the information for scroll display includes information on a scroll display speed.
43. (Previously Presented) A data storage medium with display data recorded thereon as defined in claim 38, characterized in that the information for scroll display includes information for specifying a scroll display area on the display screen of a display device.
44. (Currently Amended) A data storage medium with display data recorded thereon as defined in claim 38, characterized in that the information for scroll display includes information for specifying a scale of enlargement or reduction of a display area for scroll display of its associated on the screen of a display device.

45. (Previously Presented) A data storage medium with display data recorded thereon as defined in claim 38, characterized in that the information for scroll display associated with each image data object includes synchronous reproduction information for specifying other data to be reproduced in synchronism with the scroll display of each image data object.

46. (Currently Amended) A display device for reproducing and displaying the files recorded on the storage medium with display data recorded thereon as defined any one of claims 38 to 45, which performs comprising a display controller performing scroll display based on the information for scroll display.

47. (Currently Amended) A display device as defined in claim 46, characterized in that further comprising a scroll indicating means controls for monitoring the scroll display of said image data objects on a display screen of said display device.

48. (New Claim) A data storage medium with display data recorded thereon according to claim 28, wherein the scroll display control information specifies the scroll path of the display of the display information as vectors identified by co-ordinate values of said pre-specified units in a coordinate system defined by said display data according to coordinate values assigned to the display information in each said pre-specified units.
49. (New Claim) A data storage medium with display data recorded thereon according to claim 48, wherein a sequential display of said pre-specified units of display data is conducted along said vectors.
50. (New Claim) A data storage medium with display data recorded thereon according to claim 28, wherein the scroll display control information specifies the scroll path of the display of the display information as vectors identified by co-ordinate values of said pre-specified units in a coordinate system defined by said display data according to coordinate values assigned to the display information in each said pre-specified units; and wherein a sequential display of said pre-specified units of display data is conducted along said vectors.

51. (New Claim) A data storage medium with display data recorded thereon according to claim 38, wherein the information for scroll display specifies the scroll path of the display of the image data objects as vectors identified by co-ordinate values of said image data objects in a coordinate system defined by said files according to coordinate values assigned to said image data objects in each said files.
52. (New Claim) A data storage medium with display data recorded thereon according to claim 51,
53. (New Claim) A data storage medium with display data recorded thereon according to claim 38, wherein the information for scroll display specifies the scroll path of the display of the image data objects as vectors identified by co-ordinate values of said image data objects in a coordinate system defined by said files according to coordinate values assigned to said image data objects in each said files, and wherein a sequential display of said image data objects is conducted along said vectors.
54. (New Claim) A data storage medium with display data recorded thereon as defined in claim 28, characterized in that the scroll display control information includes a scale of enlargement or reduction of a display area for scroll display.

55. (New Claim) A data storage medium with display data recorded thereon as defined in claim 38, characterized in that the information for scroll display includes a scale of enlargement or reduction of a display area for scroll display on the screen of a display device.